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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/689,699

10/22/2003

Hiroshi Kainuma

TOC-0007

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EXAMINER

WEINSTEIN, LEONARD J

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

06/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/689,699

Applicant(s)

KAINUMA ET AL.

Examiner

Leonard J. Weinstein

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4 and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2 and 4-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment of March 28, 2007. In making the below rejections and/or objections the examiner has considered and addressed each of the applicant's arguments.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al. 6,250,600. Kumagai discloses the following limitations as claimed including: a control valve for a variable capacity compressor 50 comprising a bellows main body 67, retained as a pressure sensing element in a bellows case 66 with an airtight structure, and transfers expansion and contraction of the bellows main body in response to a variation in inlet pressure 72 of a variable capacity compressor to a valve element 61 through a valve rod, 65 and 77, supported to be movable in a valve lifting direction from a valve housing 54 integral with said

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bellows case to thereby change a valve opening degree, a patch member, 69 of 71, is provided to a movable-side end portion of the bellows main body and is formed with a fitting recessed portion 78, a valve rod 59 being fitted to be able to float in the fitting recessed portion, one end portion, bottom portion of element 59, of a valve rod 59 housed in the fitting recessed portion 78 of a patch member 69 in a tiltable manner, and a compression coil spring 70 disposed between the patch member and a lower patch member 68 for supporting a fixed-side end portion of the bellows main body; and a bottom portion of the fitting recessed portion forming a stopper face portion 71a that can come in contact with a stopper face portion formed at a central portion 75 of the lower patch member. Kumagai discloses the claimed invention except for an edge of an end portion of a valve rod fitted for the recessed portion of a patch member being formed with a radius of curvature or hemispherically formed. It would have been an obvious matter of design choice to form the bottom surface of the valve rod of Kumagai to have a radius of curvature giving it a rounded shape. A change in form or shape is generally recognized as being within the level of ordinary skill in the art, absent any showing of unexpected results. In re Dailey et al., 149 USPQ 47.

5. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi. Taguchi discloses all the limitations of the invention as claimed including: a control valve for a variable capacity compressor 7, comprising a bellows main body 77 retained as a pressure sensing element in a bellows case 57 with an airtight structure, and transfers expansion and contraction of the bellows main body in response to a variation in inlet pressure 83 of the variable capacity compressor to a valve element 67 through a valve rod 61 supported to be movable in a valve lifting direction from a valve housing 63 integral with the bellows case to thereby change a valve opening degree, a patch member, T shaped member connected to

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bottom of element 73 which forms a fitting recessed portion, is provided to a movable-side end portion of the bellows main body 77, a valve rod 81 being fitted to be able to float in the fitting recessed portion 73, one end portion, bottom portion of element 81, of a valve rod 81 housed in the fitting recessed portion 73 of a patch member 71 in a tiltable manner, and a compression coil spring 79 disposed between the patch member and a lower patch member, T shaped member attached to the bottom of bellows 77 main body, for supporting a fixed-side end portion; a contact end portion of a valve rod 81 in contact with the fitting recessed portion 73 in a substantially central position in the expanding/contracting direction of the bellows main body; a fixed-side end portion of a bellows main body mounted to the lower patch member substantially in the same shape as the patch member with a lower T shaped member attached to bellows 77, a side face of the lower patch member supported on a support tube portion formed to stand from the bellows case 55, a stopper face portion formed at a central portion of the lower patch member, top-center area of lower T shaped member attached to bellows, supported on a support portion extending from an adjusting screw 75 member. Taguchi discloses the claimed invention except for an edge of an end portion of a valve rod fitted for the recessed portion of a patch member being formed with a radius of curvature or hemispherically formed. It would have been an obvious matter of design choice to form the bottom surface of the valve rod of Taguchi to have a radius of curvature giving it a rounded shape. A change in form or shape is generally recognized as being within the level of ordinary skill in the art, absent any showing of unexpected results. In re Dailey et al., 149 USPQ 47.

Response to Arguments

6. Applicant's arguments with respect to claims 1-2 and 4-5 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are cited on form 892 herewith.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

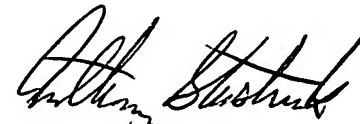
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard J. Weinstein whose telephone number is 571-272-9961. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on 571-272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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